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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/528,229

03/18/2005

Daisuke Itoh

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EXAMINER

WOOD, ELLEN S

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

10/16/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/528,229	<b>Applicant(s)</b> ITOH ET AL.	
	<b>Examiner</b> ELLEN S. WOOD	<b>Art Unit</b> 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 September 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 09/17/2008 has been entered.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mitsuhiro et al. (EP 0825221, hereinafter "Mitsuhiro").

Mitsuhiro discloses a polyester sheet having excellent heat stability and mechanical stretch which are prepared by using aliphatic polyesters with specific melt properties for practical use (pg. 2 lines 7-9). The sheet is formed of a material containing as a main component an aliphatic polyester have a melting point of 70-190°C (pg. 4 lines 41-43). The aliphatic polyester is formed by reacting two components of glycols and dicarboxylic acid (pg. 4 lines 52-57). The glycol component includes aliphatic glycols, such as ethylene glycol, 1,4-butanediol, 1,6-hexanediol, 1,8-octanediol, 1, 10-decanediol, and mixtures thereof (pg. 5 lines 53-55). The dicarboxylic acid component is that of succinic acid, adipic acid, suberic, sebacic acid and mixtures thereof (pg. 6 lines 1-4). A third component may be added in the amount of 0.1-5 mole% of a trifunctional component or a 0.1-3 mole % of a tetrafunctional component relative to 100 mole % of the total of aliphatic dicarboxylic acid components (pg. 6 lines 24-26). The third component causes the branching of long chains and can impart desirable properties in the molten state to the polyester prepolymer (pg. 6 lines 18-23). The third component can be trimesic acid, propane tricarboxylic acid and the like (pg. 6 lines 46-48), which are hydroxycarboxylic acids.

Mitsuhiro discloses that to achieve a melting point higher than 70°C the polyester prepolymer need to have a melt temperature of at least 60°C (pg. 7 lines 41-42). The polyester was extruded to form a sheet that was longitudinally stretched at a stretching ratio of fourfold by a roller longitudinal stretcher under conditions where the temperature of the sheet was 50°C (pg. 11 lines 46-50). The longitudinally stretched sheet was immediately fed to tenter transverse stretcher, where the sheet temperature was raised

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to 60°C and transversely stretched at a ratio of fourfold (pg. 11 lines 50-52). The sheet was subject to heat fixation treatment under conditions where the sheet temperature was 100°C (pg. 11 lines 52-53). The sheets are suitable for a variety of uses, for example, bottles for liquids and films (pg. 5 lines 49-53).

Mitsuhiro is silent with regards to the specific dimensions and characteristics that were tested by the applicant.

The applicant discloses an intensely stretched product of aliphatic polyester (pg. 3 lines 20-22). An intensely stretched product is that that has a stretching ratio exceeding three times in each of biaxial directions (pg. 3 lines 9-10). It is seen in the Mitsuhiro reference that the sheet has been stretched in each of the biaxial directions four times, thus the product of Mitsuhiro is intensely stretched. The polyester sheets of the applicant results in improvements in strength and heat resistance, while maintaining the biodegradability properties. The polyester sheets of Mitsuhiro have excellent heat stability and mechanical strength while maintaining the biodegradability properties (pg. 2 lines 7-9). The crystalline aliphatic polyester is formed from a glycol component and a dicarboxylic acid component such as ethylene glycol and 1,4-butane diol with aliphatic dicarboxylic acids with a triunctional component (pg. 7 lines 1-18). The stretching of the sheet was preformed at a stretching temperature of 45-60°C (pg. 15 lines 21-24) at a ratio preferably fourfold (pg. 16 lines 1-6). The stretched product was heat treated at a temperature between 100-210°C (pg. 16 lines 7-10).

It would be obvious to one of ordinary skill in the art that the stretched product of Mitsuhiro would possess the same properties and characteristics as claimed by

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applicant, because Mitsuhiro crystalline aliphatic polyester is of similar composition and has the same required intense stretching as emphasized by the applicant. The properties discovered by the applicant constitute routine experimentation and thus are not patentably distinct characteristics of the stretched product.

### ***Response to Arguments***

5. Applicant's arguments with respect to claims 1-12 have been considered but are moot in view of the new ground(s) of rejection.

6. The Mitsuhiro reference displays a very similar crystalline aliphatic polyester stretched product with the required intense stretching that the applicant argues. Thus, the examiner considers the reference to overcome the arguments that the applicant has set forth.

### ***Response to Amendment***

7. The declaration under 37 CFR 1.132 filed 09/17/2008 is sufficient to overcome the rejection of claims 1-12 based upon Obuchi et al. (US 6,417,294).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ELLEN S. WOOD whose telephone number is (571)270-3450. The examiner can normally be reached on Monday-Friday 7-5:30pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on 571-272-1284. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Ellen S Wood  
Examiner  
Art Unit 1794

/Carol Chaney/  
Supervisory Patent Examiner, Art Unit 1794